

# CVGSM2 Base Case Pre-Calibration: Stream Flow Comparisons

A Look at the Sacramento River  
and San Joaquin River Major  
Flows

August 6th, 2004



# CVGSM2 Streamflow Review

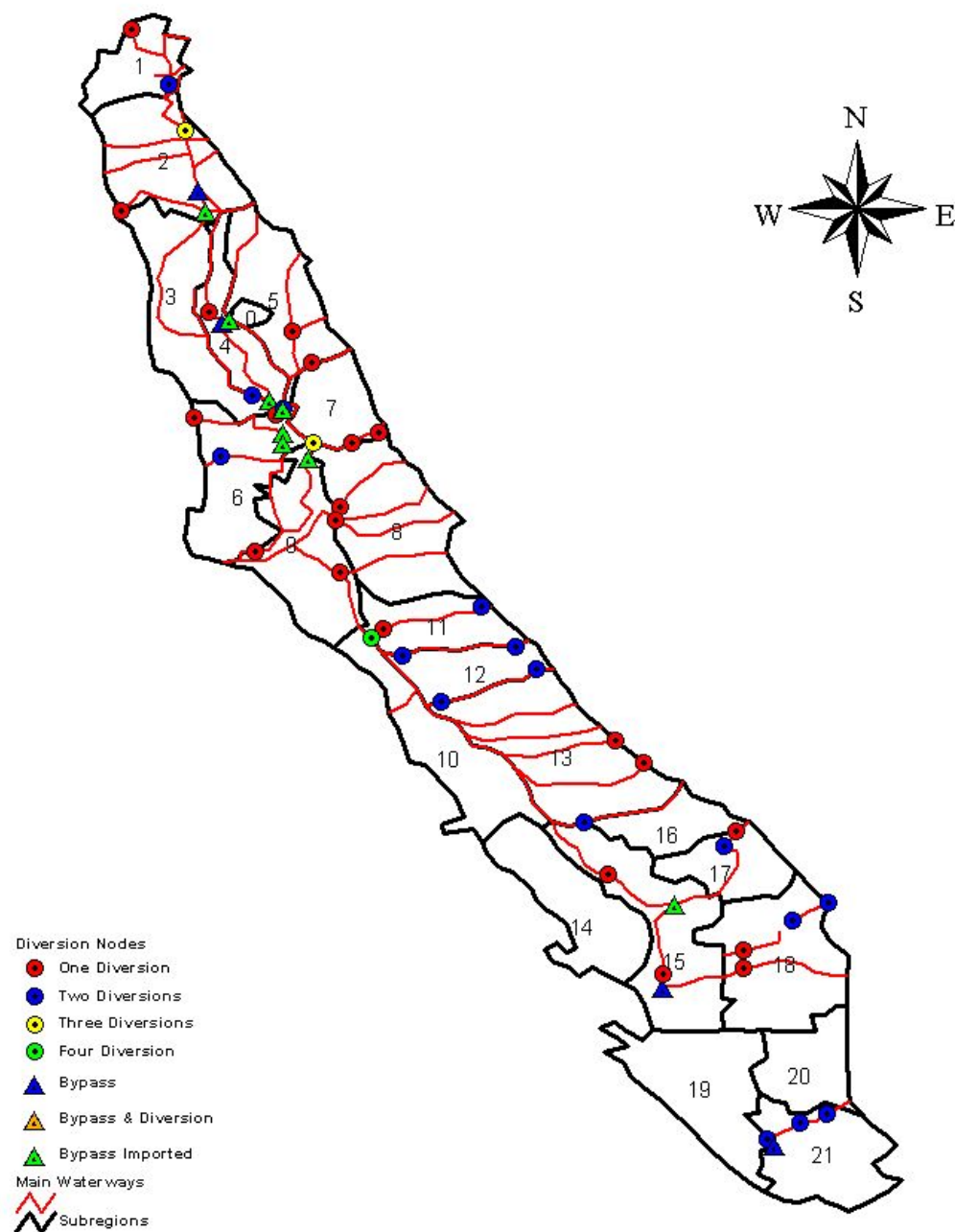
- 34 Boundary stream inflows for SAC, SJ, and TUL Basins
- 428 stream nodes and 71 stream reaches (no GCC)
- Approx. 110 historical diversions / deliveries from stream system
- Elemental stream drainage patterns for runoff and return flow specified
- SW/GW interaction and Small Watershed Inflows modeled as well

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# CVGSM2 Stream Network with Diversion and Bypass Nodes

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- Depletion Study Outflow Comparisons for Subregions 2, 4, 5, 6, and 8: DSA's 10, 15, 69, 65, and 59 respectively. This was due to lack of gage data for entire POR, Depletion Studies based on historical gage data.
- Actual gage data comparisons available for Subregions 1,7, and San Joaquin System
- Stream Gage Locations

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# Comparison Locations, Sac River

- Sacramento River @ Bend Bridge (58)
- Sacramento River @ Ord Ferry (10)
- Sacramento River @ Knights Landing (15)
- Feather River @ Mouth (69)
- Sacramento River @ Freeport (70)
- Yolo Bypass Outflow (65)

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# Comparison Locations, San J River

- San Joaquin River @ Newman
- Merced River @ Stevinson
- Tuolumne River @ Modesto
- Stanislaus River @ Ripon
- San Joaquin River @ Vernalis (SanJ)
- Mokelumne, Calaveras, Consumnes (59)

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# Refinements to Comparisons

- Individual reach comparisons for tributaries to check for propagation of error to Sacramento and San Joaquin main channel (heavily data dependent).
- Add Chowchilla Bypass to San Joaquin River
- Tulare Basin stream data search (USACE?)

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# Initial Stream Calibration

- Calibration of stream bed conductance by reach.
- Stream bed thickness and wetted perimeter set to a constant value for each reach.
- Calibration over entire 77 year model simulation, monthly.
- To date, no major improvements from Base-Case simulation. Need to look at elemental runoff patterns, soil characteristics, and other possibilities

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